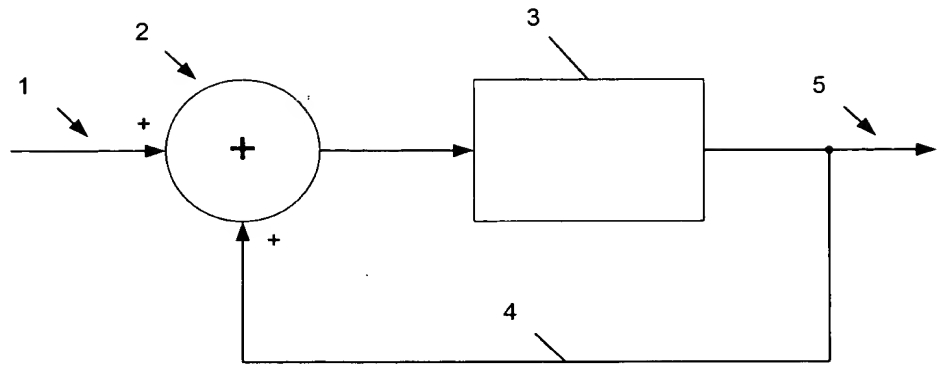

FIGURE 1A

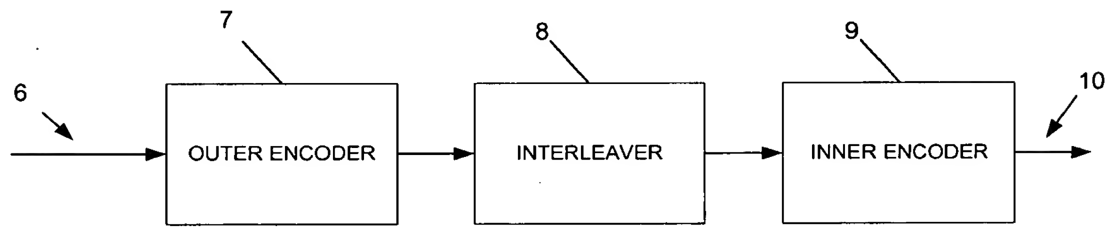

FIGURE 1B

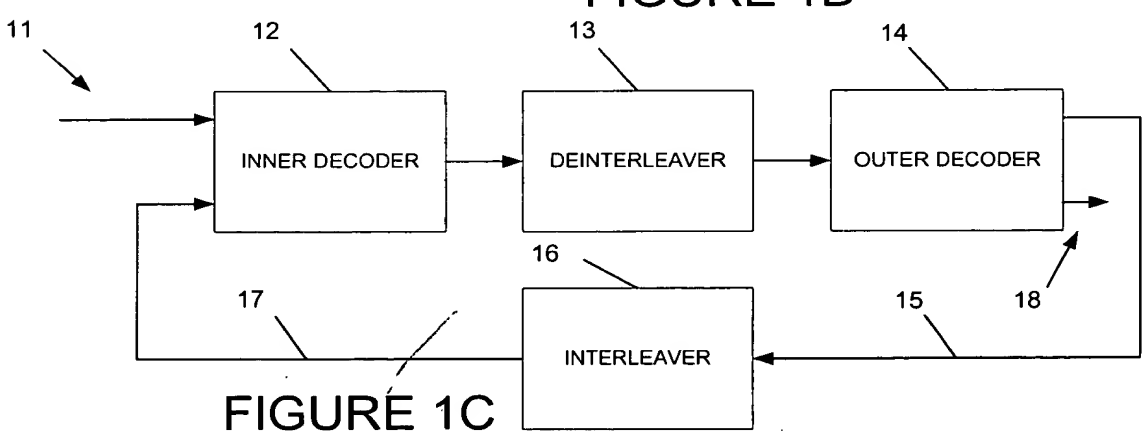

FIGURE 1C

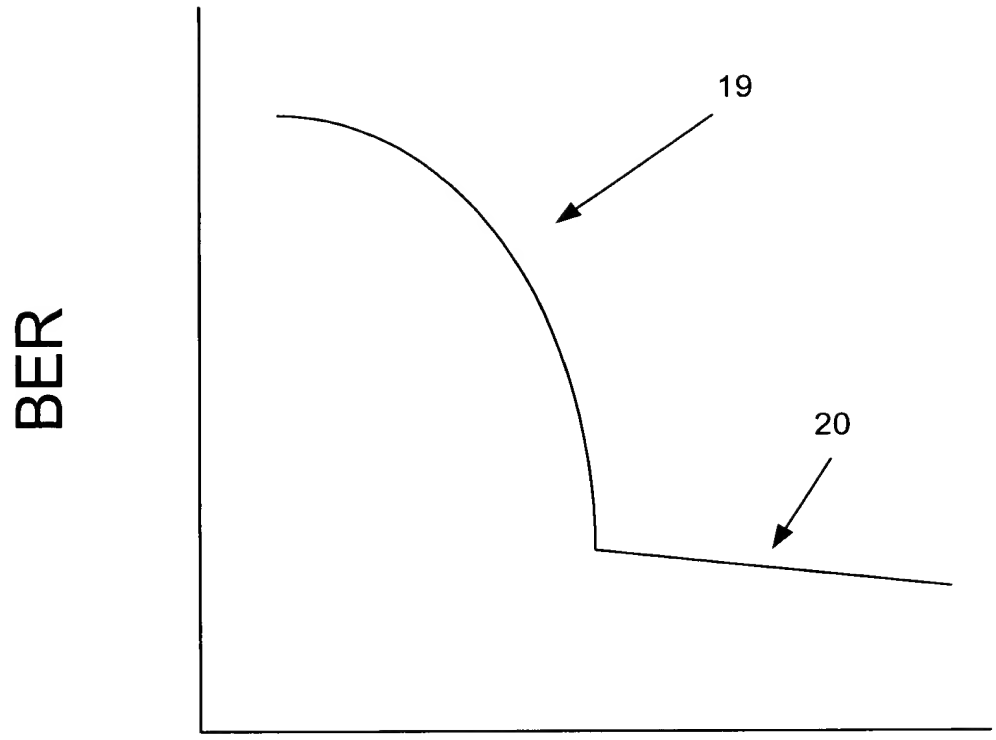

FIGURE 2

0602690-060300

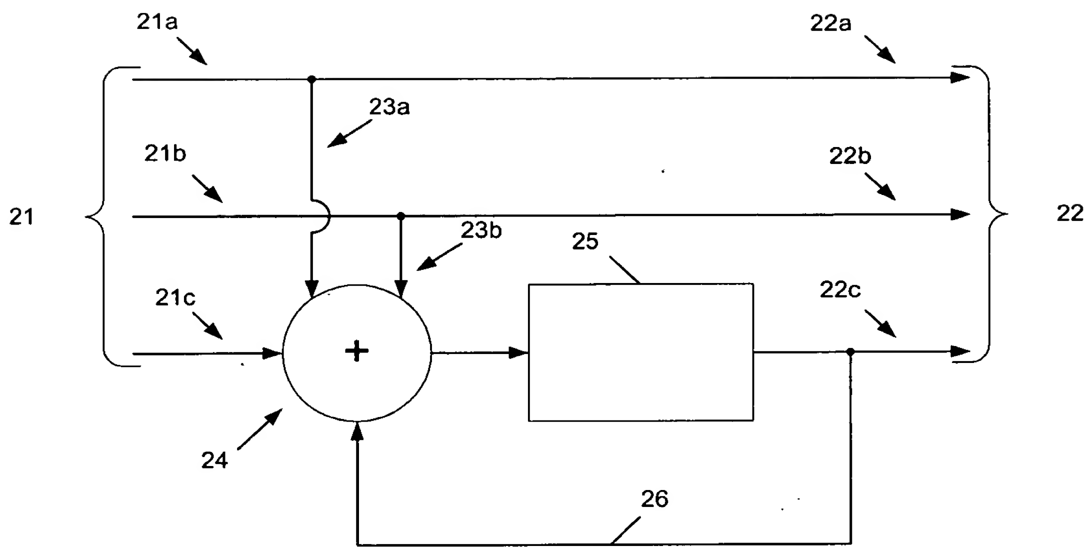

FIGURE 3A

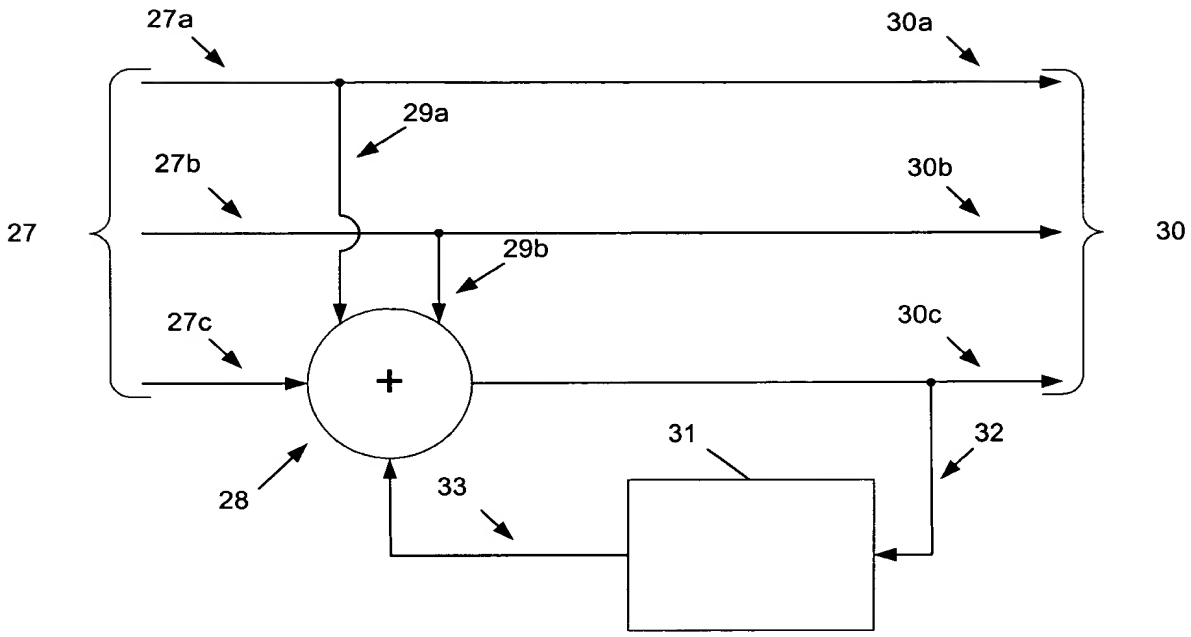

FIGURE 3B

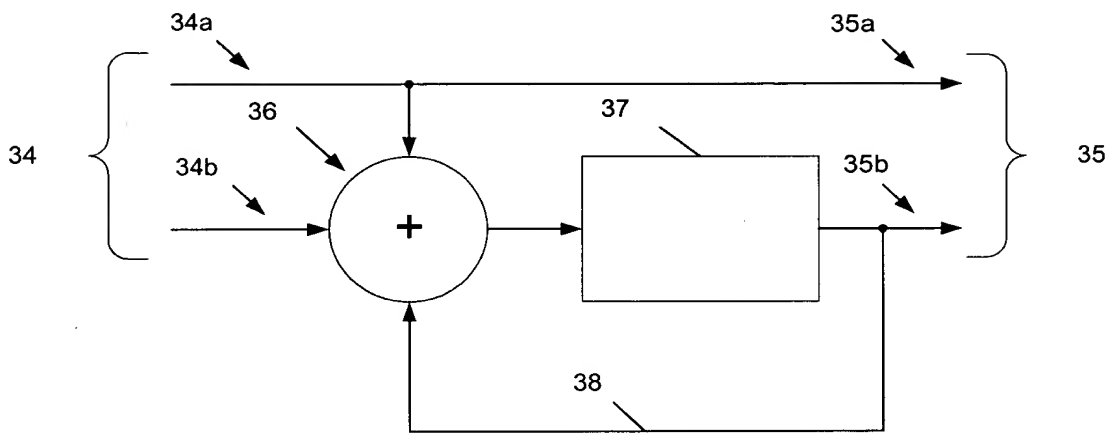

FIGURE 4

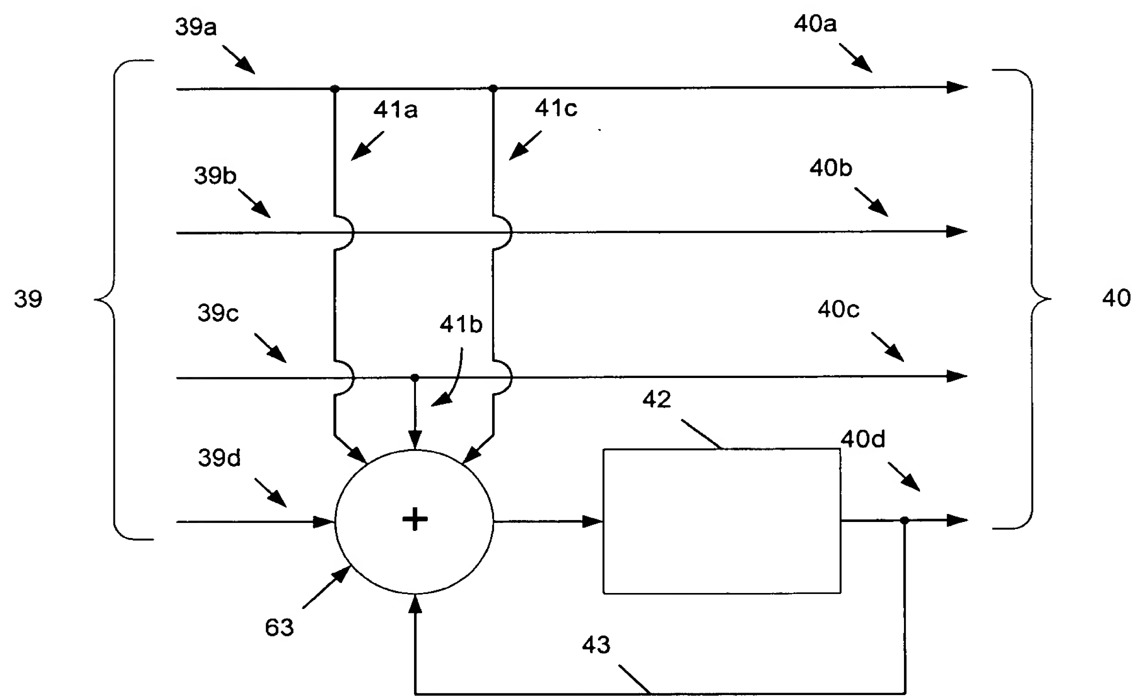

FIGURE 5

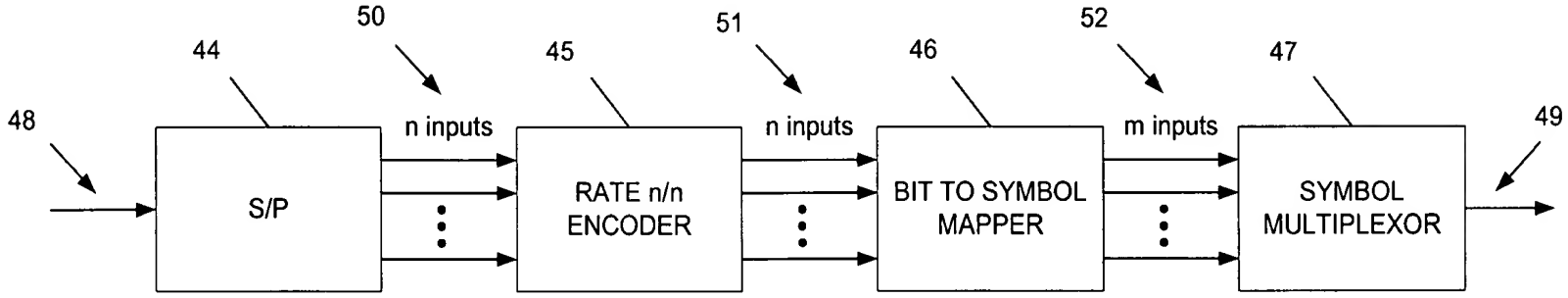
48
44
S/P
50
n inputs
45
RATE n/n
ENCODER
51
n inputs
46
BIT TO SYMBOL
MAPPER
52
m inputs
47
SYMBOL
MULTIPLEXOR
49

FIGURE 6

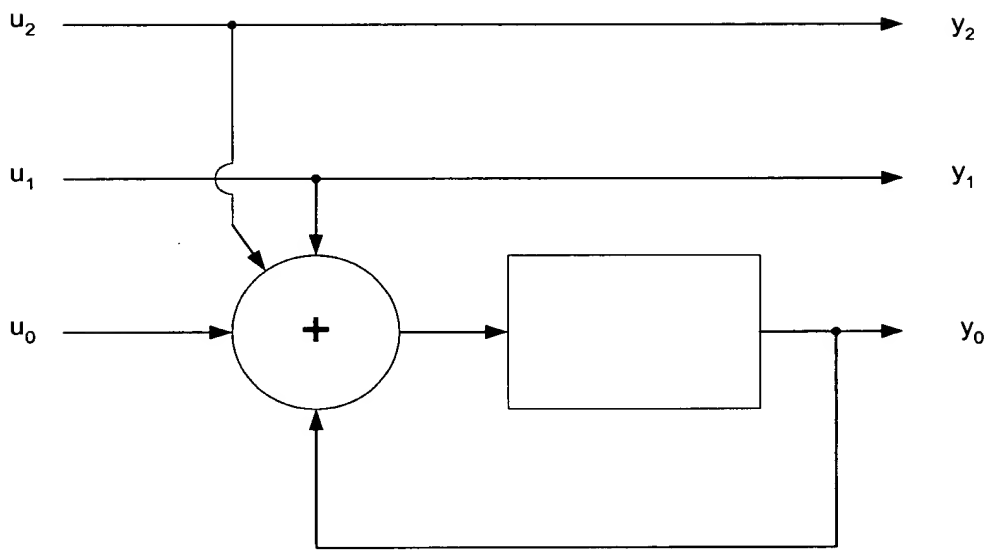

FIGURE 7A

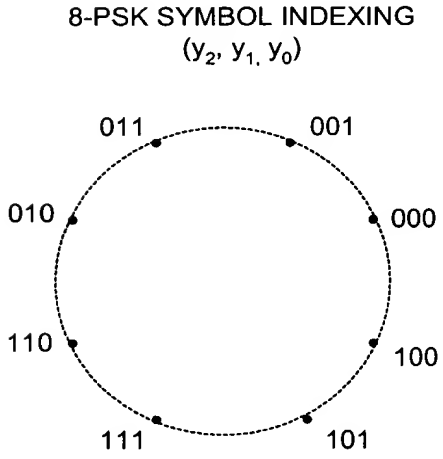

FIGURE 7B

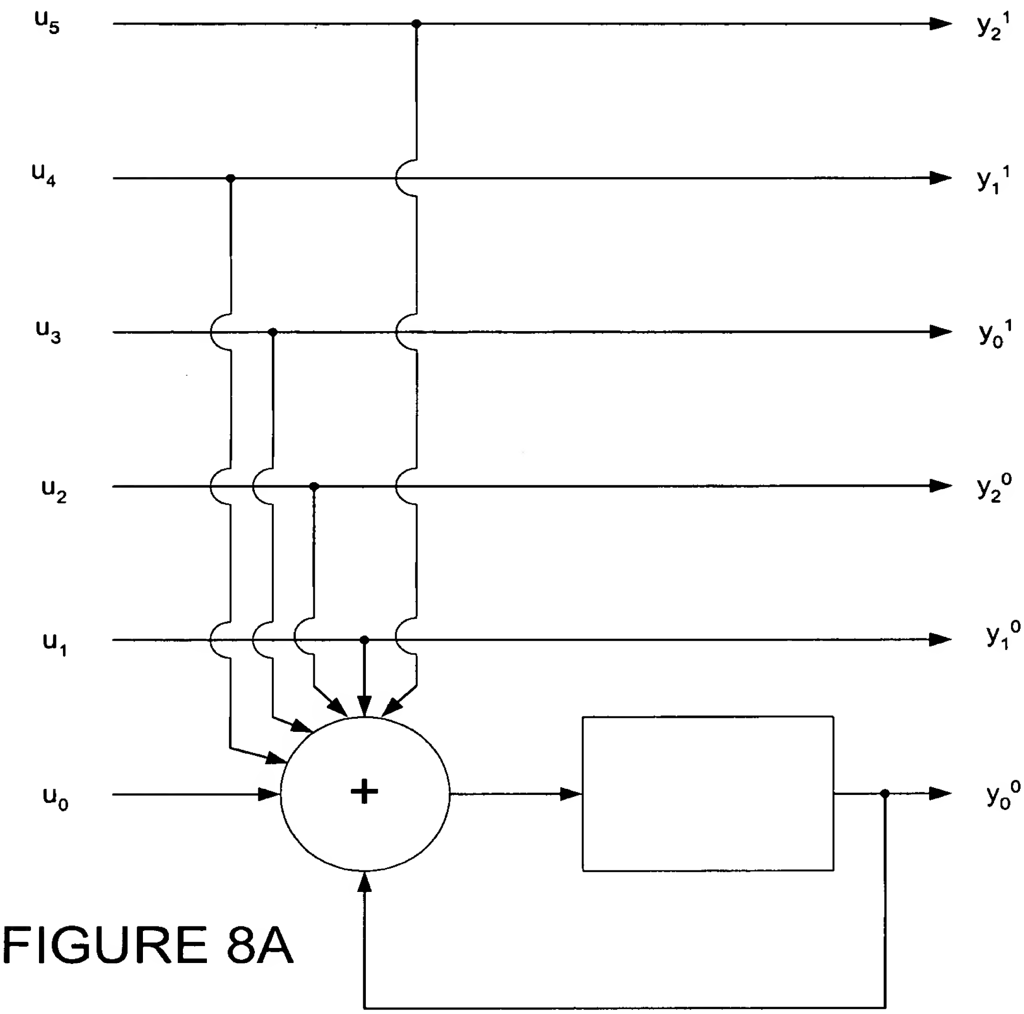

FIGURE 8A

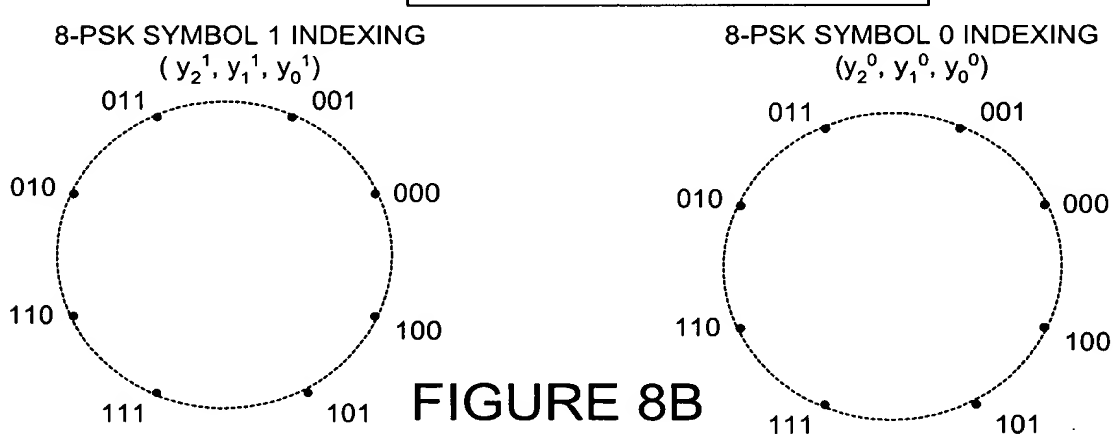

FIGURE 8B

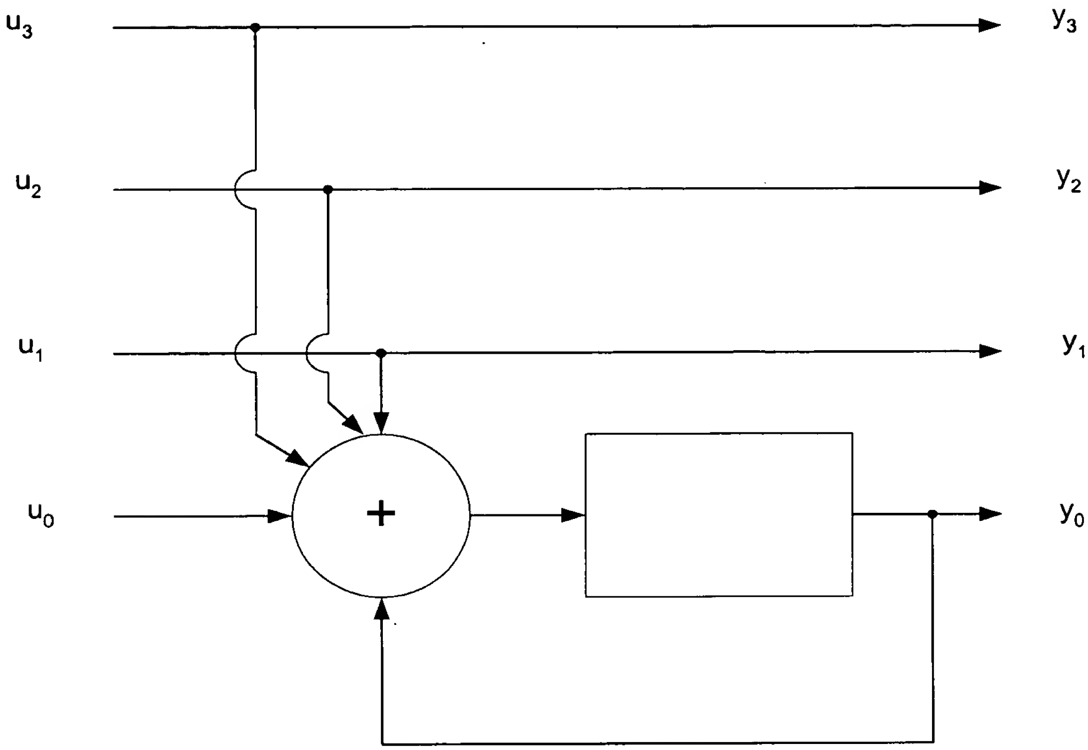

FIGURE 9A

16-QAM symbol indexing
(y_3, y_2, y_1, y_0)

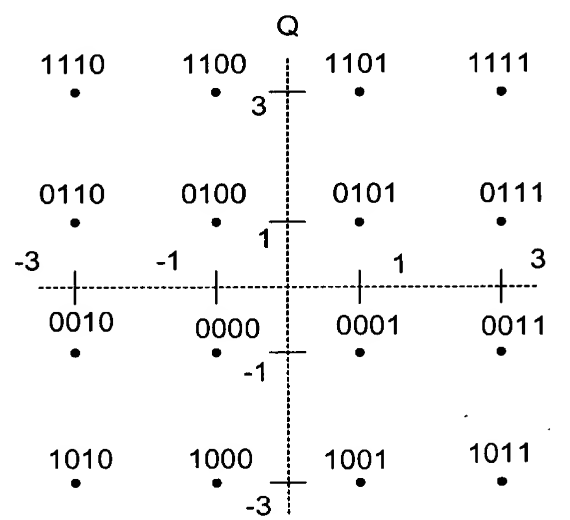

FIGURE 9B

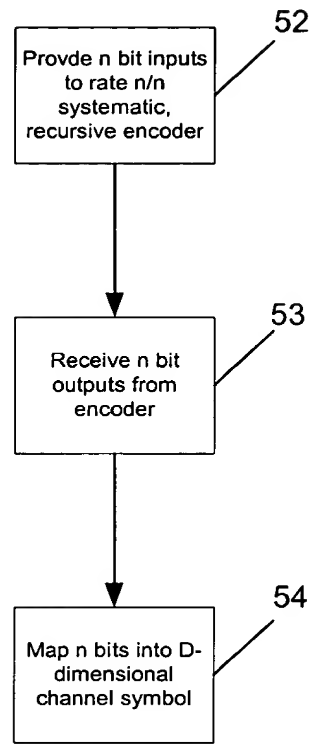
52
Provde n bit inputs to rate n/n systematic, recursive encoder
53
Receive n bit outputs from encoder
54
Map n bits into D-dimensional channel symbol

FIGURE 10

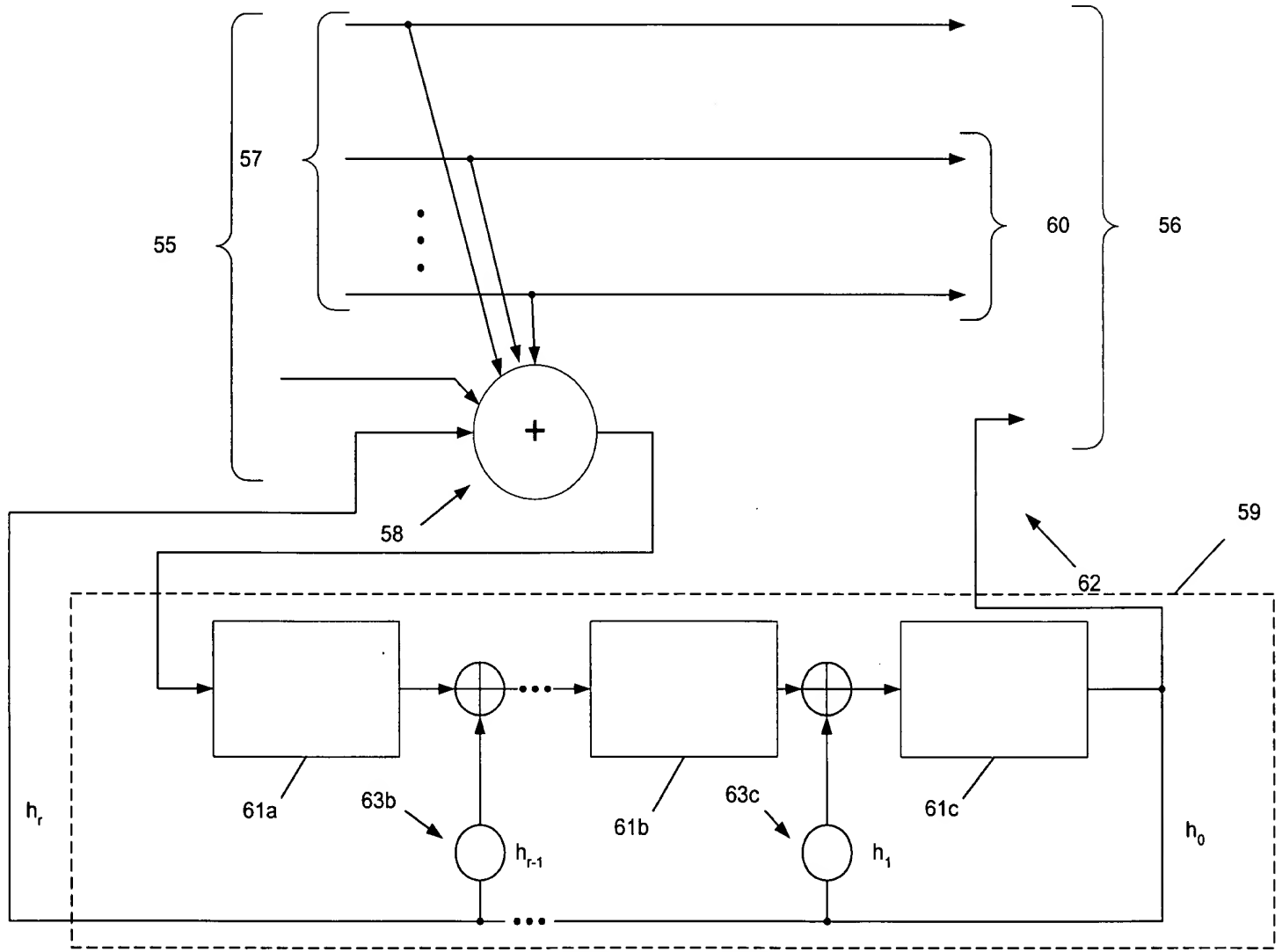

FIGURE 11A

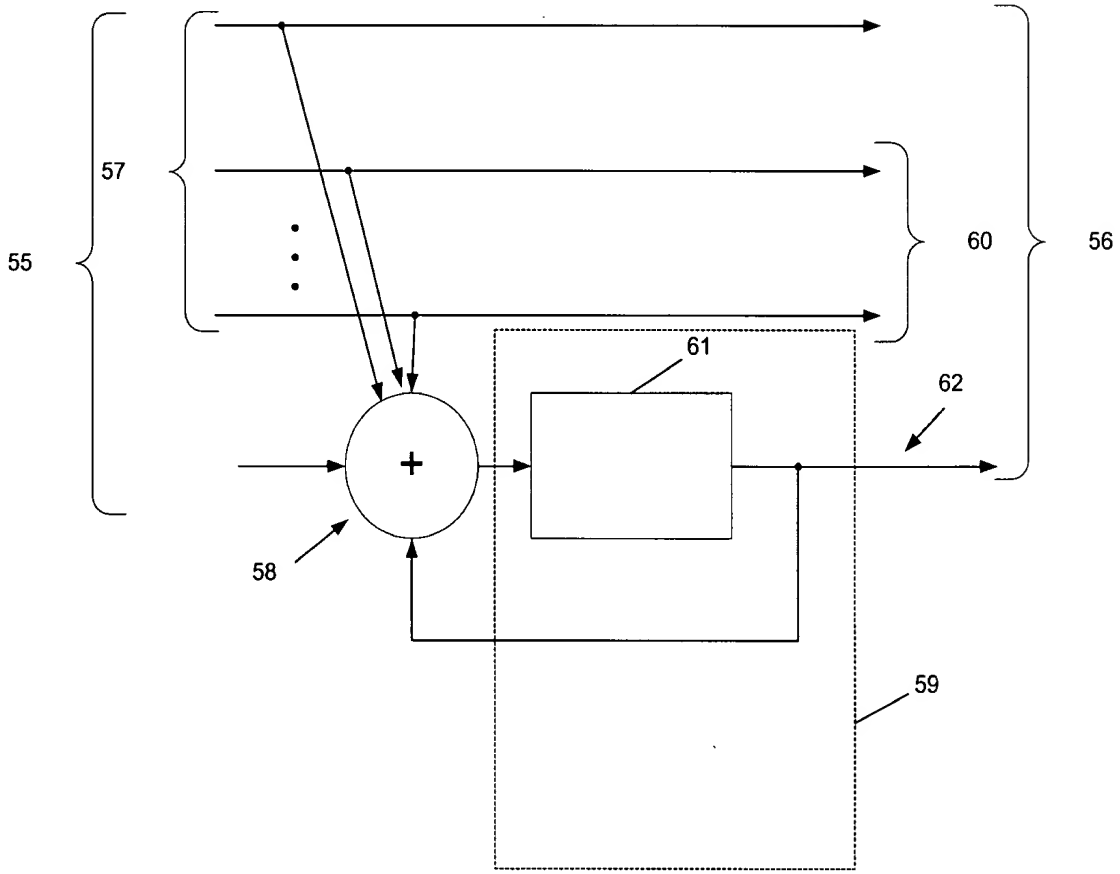

FIGURE 11B

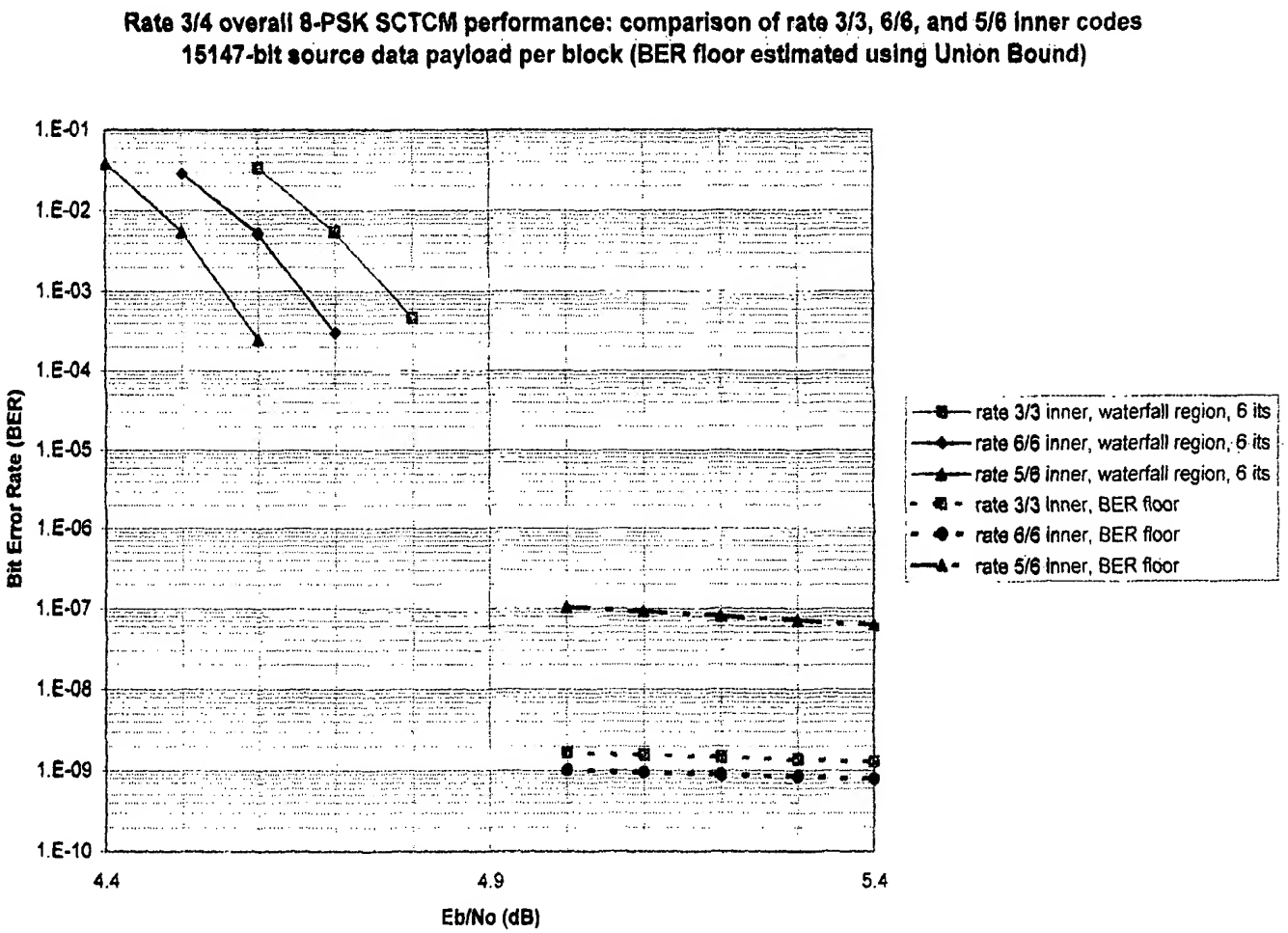
Rate 3/4 overall 8-PSK SCTCM performance: comparison of rate 3/3, 6/6, and 5/6 inner codes
15147-bit source data payload per block (BER floor estimated using Union Bound)
Bit Error Rate (BER)
1.E-01
1.E-02
1.E-03
1.E-04
1.E-05
1.E-06
1.E-07
1.E-08
1.E-09
1.E-10
4.4
4.9
5.4
Eb/No (dB)
rate 3/3 inner, waterfall region, 6 its
rate 6/6 inner, waterfall region, 6 its
rate 5/6 inner, waterfall region, 6 its
rate 3/3 inner, BER floor
rate 6/6 inner, BER floor
rate 5/6 inner, BER floor

FIGURE 12A

Rate 5/6 overall 8-PSK SCTCM performance: rate 3/3 inner code vs rate 6/6 inner code
15125-bit source data payload per block (BER floor estimated using Union Bound)

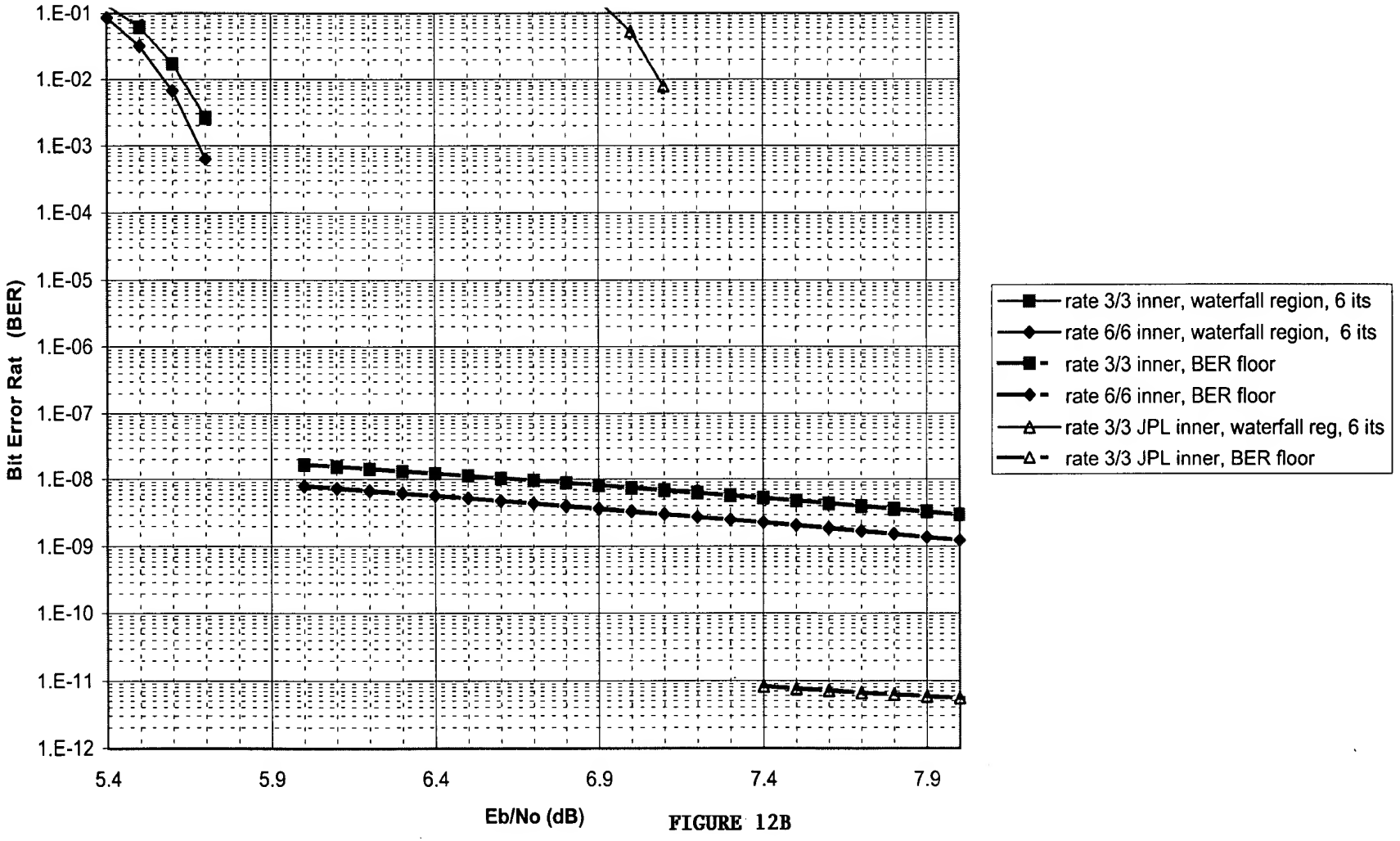

FIGURE 12B

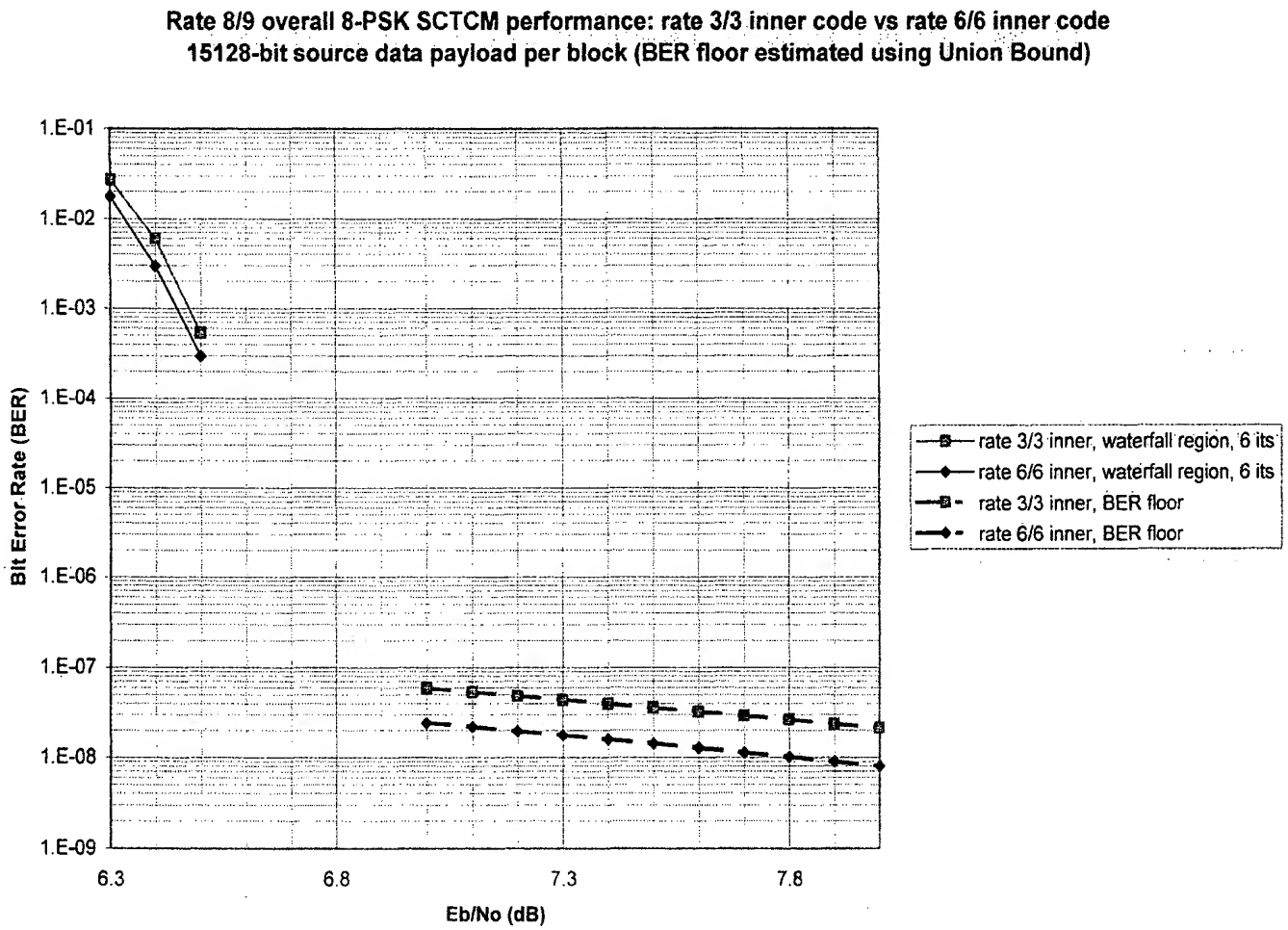
Rate 8/9 overall 8-PSK SCTCM performance: rate 3/3 inner code vs rate 6/6 inner code
15128-bit source data payload per block (BER floor estimated using Union Bound)
Bit Error Rate (BER)
1.E-01
1.E-02
1.E-03
1.E-04
1.E-05
1.E-06
1.E-07
1.E-08
1.E-09
6.3
6.8
7.3
7.8
Eb/No (dB)
rate 3/3 inner, waterfall region, 6 its
rate 6/6 inner, waterfall region, 6 its
rate 3/3 inner, BER floor
rate 6/6 inner, BER floor

FIGURE 12C

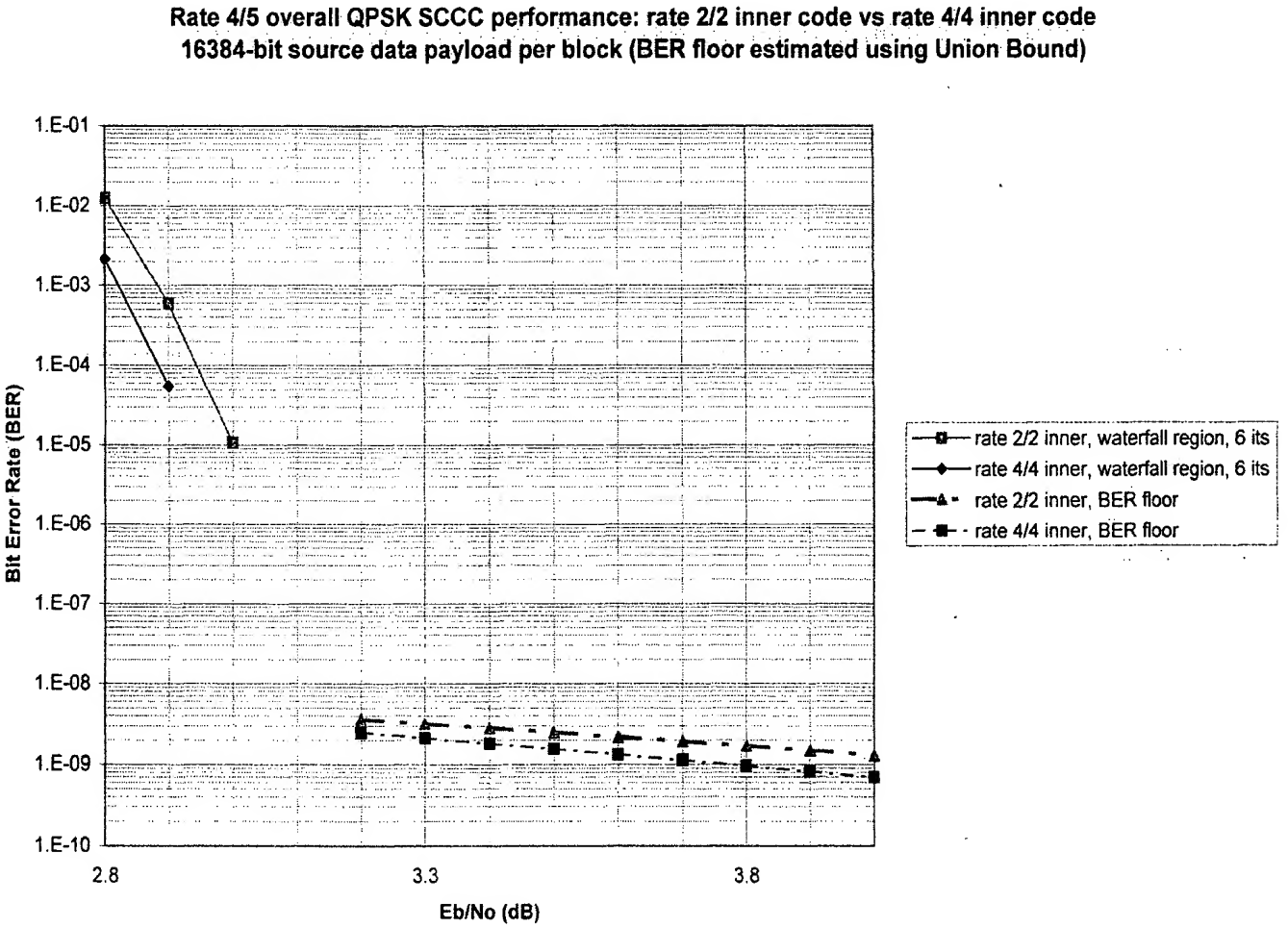
Rate 4/5 overall QPSK SCCC performance: rate 2/2 inner code vs rate 4/4 inner code
16384-bit source data payload per block (BER floor estimated using Union Bound)
Bit Error Rate (BER)
1.E-01
1.E-02
1.E-03
1.E-04
1.E-05
1.E-06
1.E-07
1.E-08
1.E-09
1.E-10
2.8
3.3
3.8
Eb/No (dB)
rate 2/2 inner, waterfall region, 6 its
rate 4/4 inner, waterfall region, 6 its
rate 2/2 inner, BER floor
rate 4/4 inner, BER floor

FIGURE 12D

Rate 2/3 Overall Waterfall Comparisons

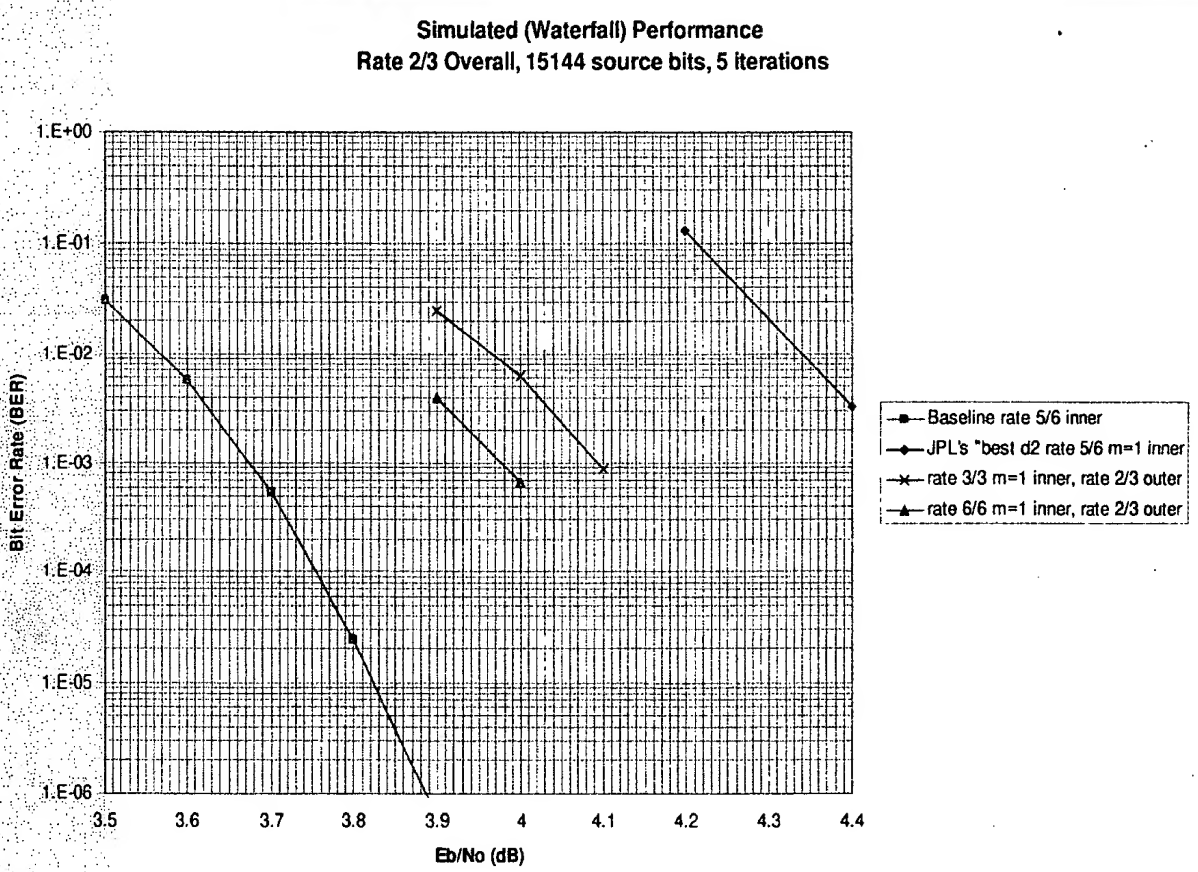

FIGURE 13A

CONEXANT

Rate 5/6 Overall Waterfall Comparisons

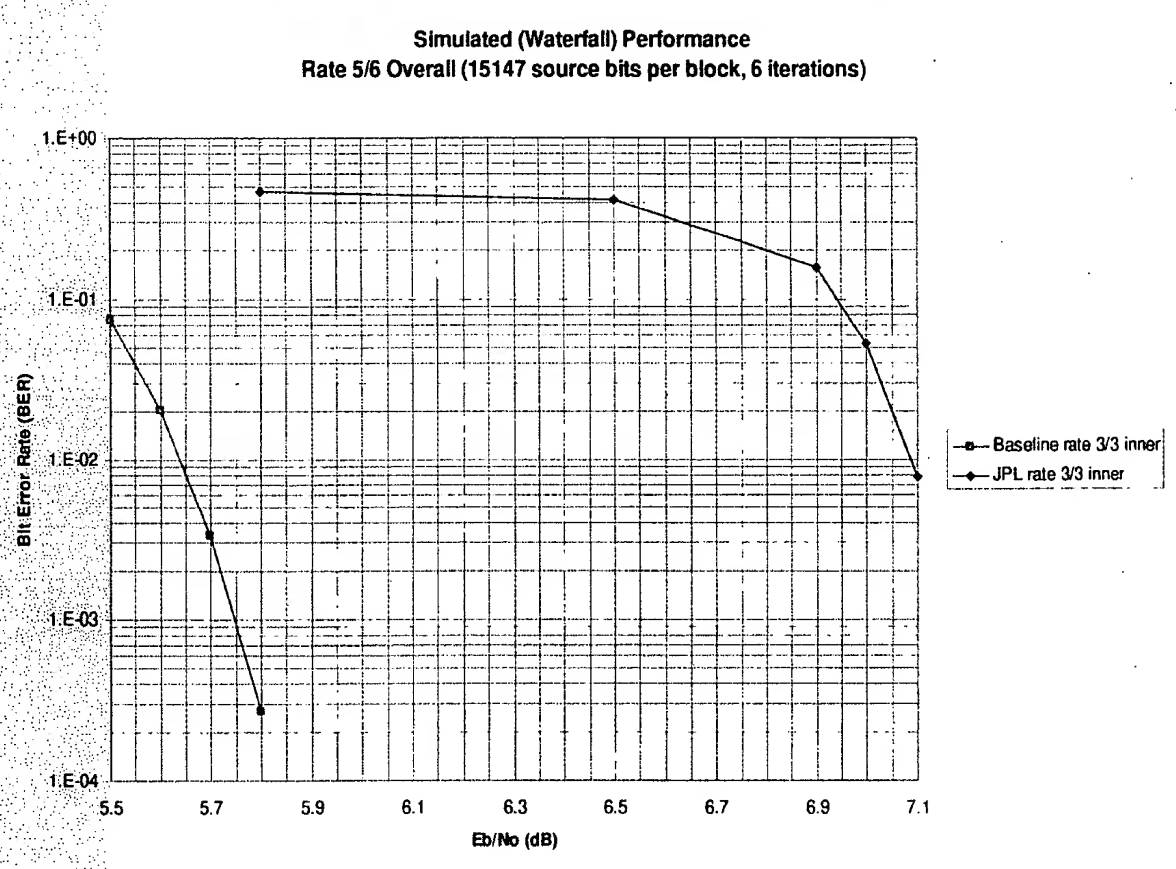

FIGURE 13B

CONEXANT

Rate 3/3 vs Rate 6/6 Codes

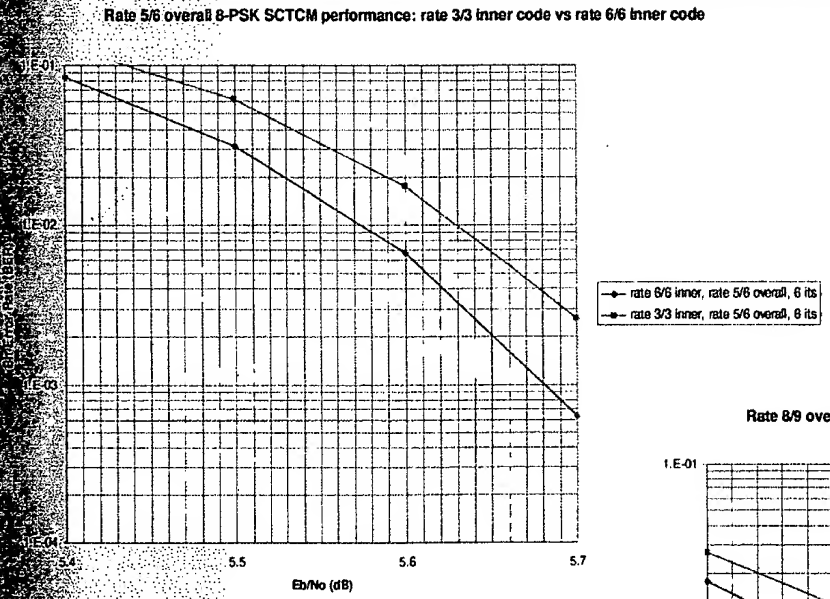

FIGURE 13C

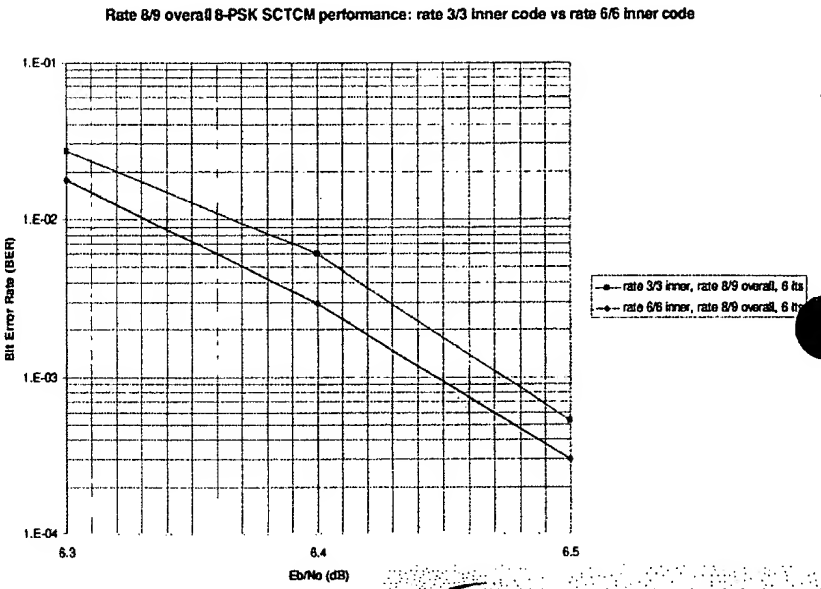

FIGURE 13D

CONEXANT

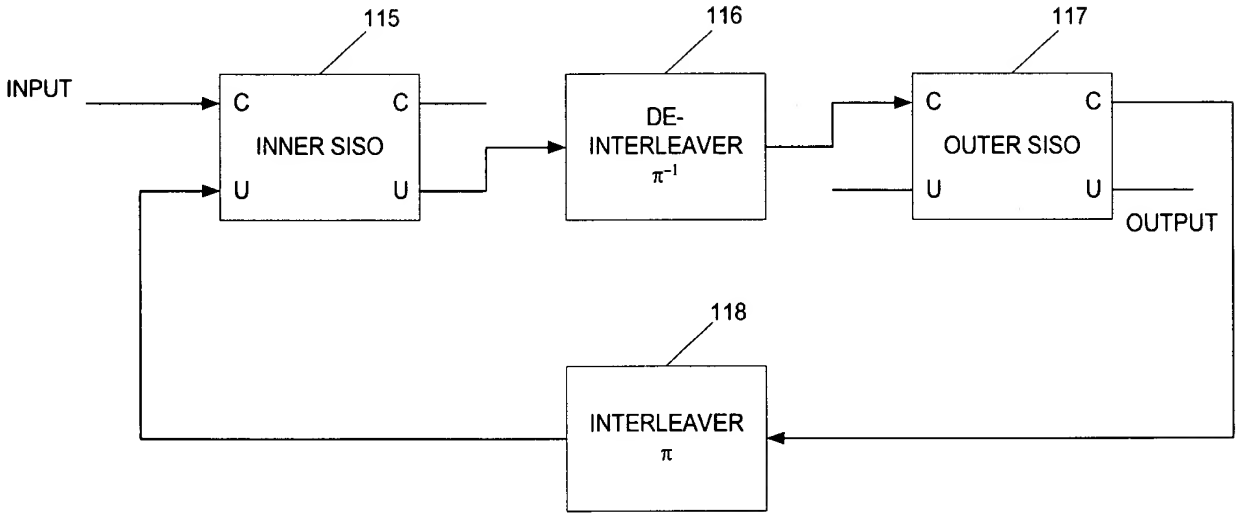
115
116
117
INPUT
C
C
INNER SISO
U
U
DE-
INTERLEAVER
π^{-1}
C
C
OUTER SISO
U
U
OUTPUT
118
INTERLEAVER
π

FIGURE 14

00E290 06920960

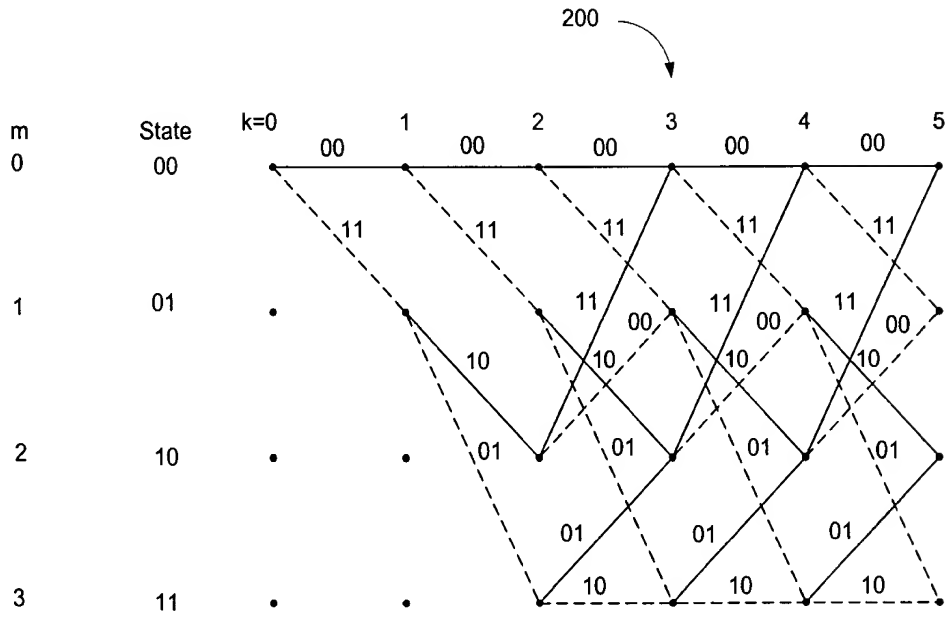

FIGURE 15

09609560.050302

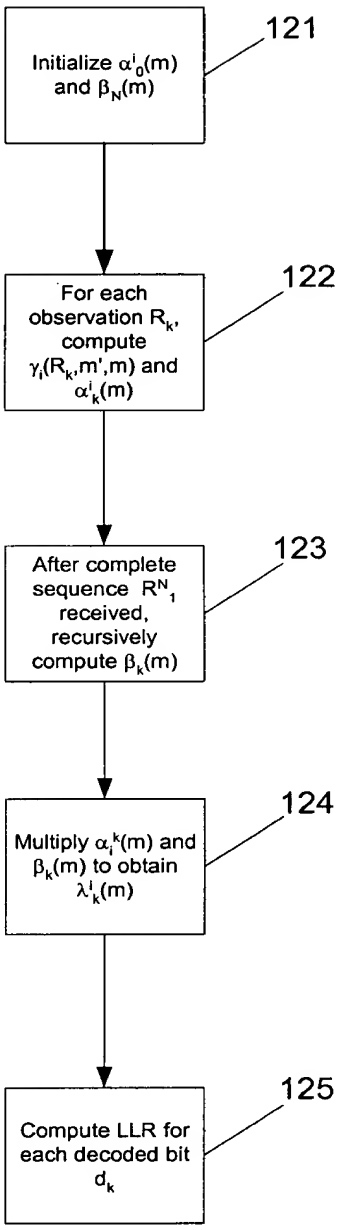

FIGURE 16

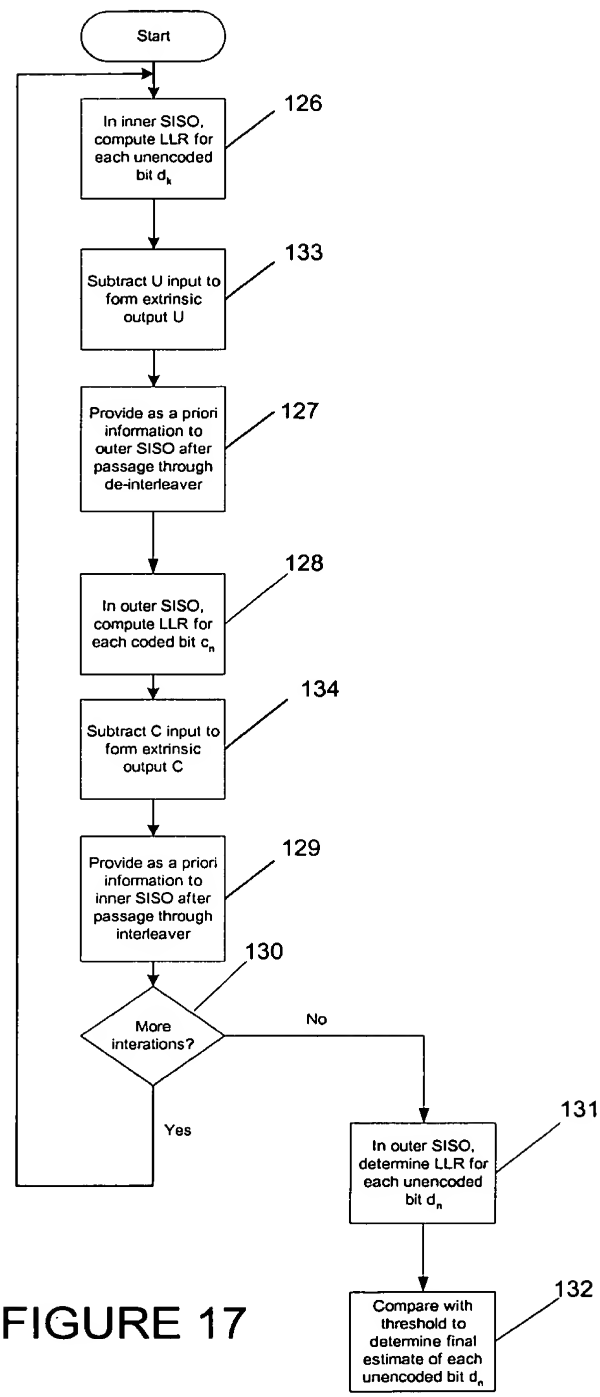

FIGURE 17

00320256.052300